

REMARKS

Reconsideration and allowance are respectfully requested.

Consideration of the Information Disclosure Statement filed on June 18, 2010 is requested.

Claims 24-29 are cancelled and features therefrom incorporated into their respective independent claims. Further example support may be found at paragraphs [0029] and [0041] in the published application.

Claim 9 stands rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. This rejection is respectfully traversed.

Claim 9 is amended to include a computer. Moreover, claim 9 depends from claim 7 which is directed to statutory subject matter. The fact that an operator may be involved in claim 9 does not render the overall claim (claims 7+9) non-statutory. Withdrawal of this rejection is requested.

Claims 19 and 23 stand rejected under 35 U.S.C. §112, second paragraph. This rejection is respectfully traversed.

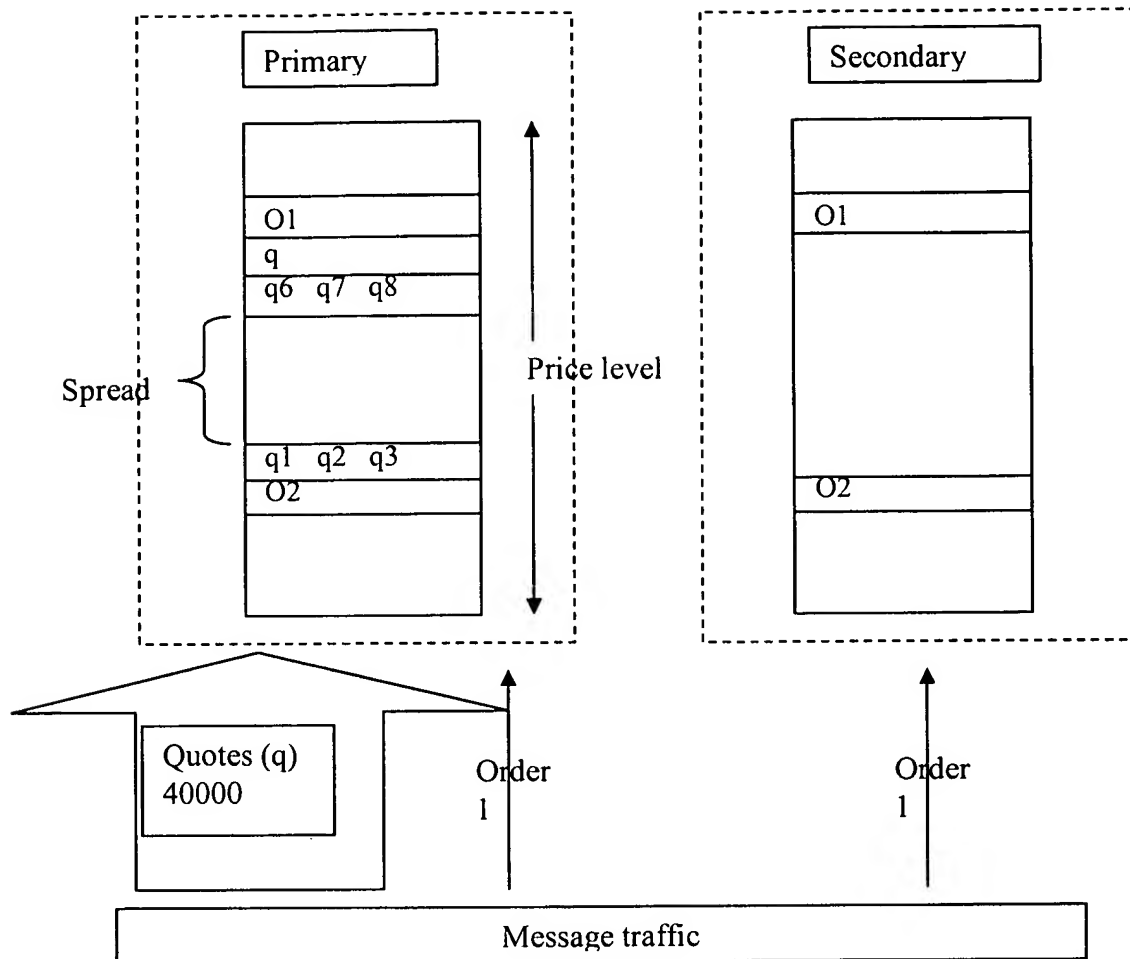
These claims are amended to address the Examiner's concerns over the terms identified in paragraph 4. Withdrawal of this rejection is requested.

Claims 1-29 stand rejected under 35 U.S.C. §103 based on Wang and newly-applied Kramer. This rejection is respectfully traversed.

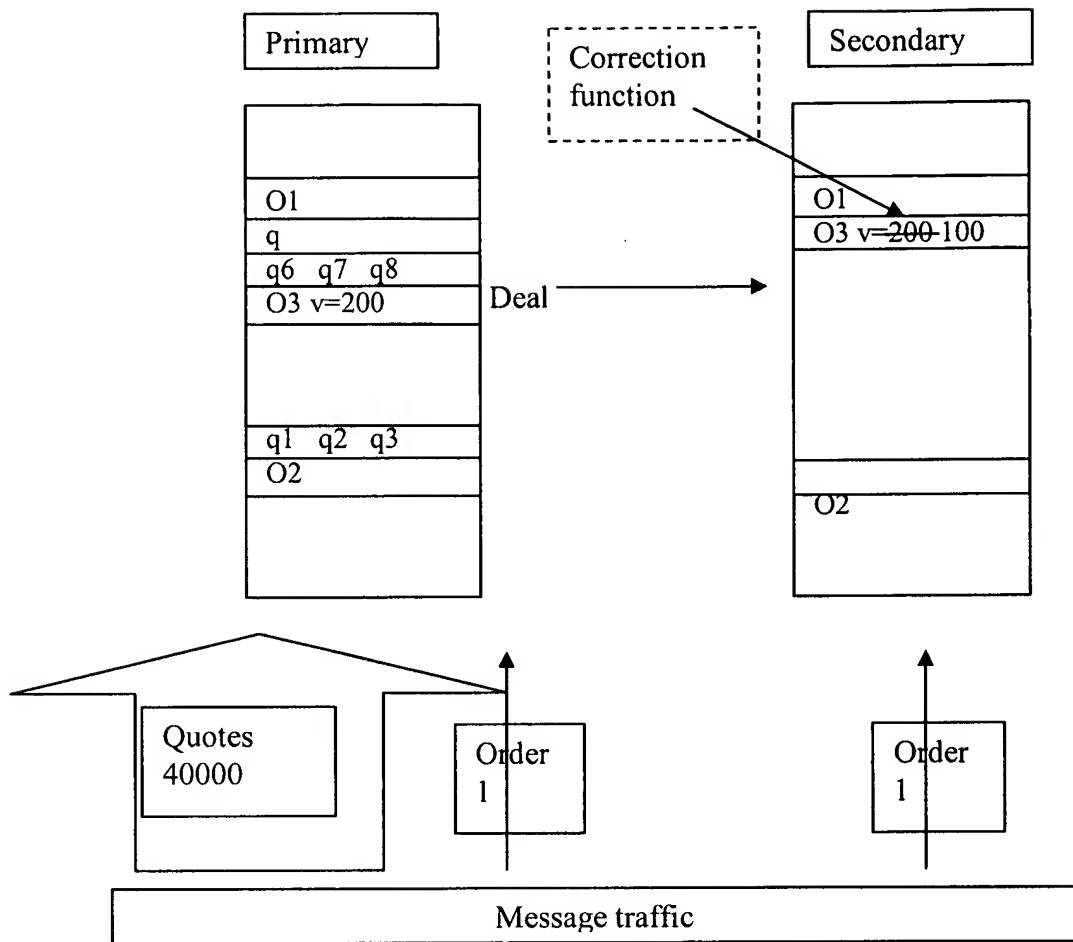
One of the reasons for maintaining a secondary back-up site is for the trading exchange to survive major disasters. To do this effectively, one would assume that all of the data from the primary site needs to be provided to the secondary site. A problem with this assumption and with traditional fail-over systems is the sheer volume of information used in some trading

systems. Given the large volume, practical bandwidth and processing resources limit the distance the information can be transferred. The dilemma then is the desire to maintain a larger (rather than shorter) geographical distance between the sites with the hope that only one site would be significantly undermined in the event of a major disaster versus the reality of practical bandwidth and resources limitations. The inventor in this application solved this dilemma.

Consider a non-limiting example where the quote/order rate is approximately 40,000 to 1, as illustrated in the figure below. Market makers usually generate new quotes at least every second for each of the instruments traded on the primary site exchange that they are responsible for. At this kind of re-quote rate, the inventor realized that it is not necessary to transfer the quotes to the secondary site and update the secondary site orderbook because the market makers will generate another re-quote if the primary site fails. Order and deal information from the primary site is stored at the secondary site but not quote information. As a result, the inventor determined that substantial bandwidth and resources can be saved by not transmitting to the secondary site and storing the huge quote volumes at the secondary site. In addition, a corrective function at the secondary site is provided that uses the deal (match) information at the primary site to update the orders at the secondary site. In the figure below, orders O1 and O2 are stored at both the primary and secondary sites, but not the 40,000 quotes (q).



The following figure illustrates the updating procedures implemented in one example embodiment by a corrective function, at the secondary site. A third order O3 arrives and matches a portion of quotes q6-q8 which are on the same price level (in this example, pro-rata matching is used). Specifically, order O3 is for a volume of 200 contracts, and quotes q6-q8 have a total volume of 100. After the deal (match), order O3 has 100 contracts left, which means that the secondary site needs updating. A corrective function implemented by the secondary site computer uses the primary site deal (match) information to update order O3 to a volume of 100 contracts.



Wang describes a generic site failover system. Specifically, a controller automatically configures a second host computer to use the data of a first host computer and to provide additional computational resources. There is no distinction between what data is stored at the primary site and what data is stored at the secondary site. Rather, Wang teaches that all data or parts of certain data may be replicated to the secondary site (col. 9, lines 36-56 and col. 10, line 58 to col. 11, line 65). The “data” in Wang comprises operating system information, application program information, and application program data. But Wang does not describe any intelligent selection and transfer of a particular subset of data to the secondary site in combination with

using that subset of data to update a larger data set in order to save bandwidth and hardware resources. There certainly is no teaching of doing this in an automated securities trading system.

Kramer describes a trading system that permits traders to use portable trading terminals 112-130 that communicate with a central computer 110 using radio signals 132 as shown in Figure 1. Kramer lists the significant technical features of his invention at col. 10, line 33-col. 11, line 24. Other than being directed to a trading system, those features are not related to the significant technical features included in the pending claims.

Turning to the specific grounds of rejection, the Examiner identifies Wang's col. 20, lines 39-45 as teaching the claimed "method for trading in securities, the trading being carried out at a primary site that includes a primary site computer according to information received from market makers and traders, said information comprising quotes from market makers and orders from traders for one or more instruments, wherein the primary computer is arranged to communicate over a communications link with a secondary site computer located at a secondary site different from the primary site" recited in claim 1. But the Wang text at col. 20, lines 39-45 says nothing about trading securities, market makers, traders, quotes from market makers, or orders from traders. Identification of each of the listed claim features in Wang is requested.

For the claim step "receiving and storing of said information at the primary site computer," the Examiner admits this is missing from Wang and turns to Kramer at col. 13, lines 63-67. While there is posting of a transaction in a primary and secondary "blotter" described, Kramer fails to teach that the posted transaction includes "said information," which as defined earlier in claim 1 includes "information received from market makers and traders, said information comprising quotes from market makers and orders from traders for one or more

instruments.” Identification of “quotes from market makers and orders from traders for one or more instruments” in Kramer is requested.

For the claim step “using said information to create deals in said instruments, said deals also being stored at the primary site computer,” the Examiner cites to Wang at col. 41, lines 11-22. There is nothing in this text that describes creating deals in financial instruments or storing such financial instrument deals. Identification of each of these claim features in Wang is requested.

The last step of claim 1 recites “transmitting from the primary site computer to the secondary site computer replicas of the orders and the deals, but not transmitting from the primary site computer to the secondary site computer replicas of each of the quotes.” This feature comes from non-canceled claim 29 for which the Examiner relies on col. 17, lines 2-7 which explains: “In one embodiment, all of the data used by the primary host computer 110 (i.e., the operating system, application programs, application program data, etc.) is replicated for use by the secondary host computer 120. In other embodiments, only portions of the data of the primary host computer 110 are replicated.” Where does this describe “transmitting from the primary site computer to the secondary site computer replicas of the orders and the deals, but not transmitting from the primary site computer to the secondary site computer replicas of each of the quotes?”

Neither reference teaches such a technological approach in order to reduce bandwidth and resource requirements while at the same time providing a fail safe system. Indeed, Wang teaches the conventional fail safe approach described in the background of this application of sending a “mirrored copy of each volume of data of the primary host computer 110 that is mirrored to a corresponding volume of data that is accessible to the secondary host computer 120.” Column 9,

lines 49-54. In the example illustration above, the mirror copies would include the 40,000 quotes along with the deal and order information. The bandwidth and resource drain in the Wang-Kramer system would be much greater than that required by the claimed technology. In addition, the claimed technology reduces the latency for quotes because they do not need to be replicated.


Dependent claim features are also not taught in either Wang or Kramer. For example, neither reference teaches “storing at the secondary site computer replicas only of orders which have not yet resulted in deals” recited in claim 2, or “the secondary site computer using a corrective function and the deals stored at the secondary site computer to update the orders stored at the secondary site computer” recited in claim 8.

The application is in condition for allowance. An early notice to that effect is requested.

Respectfully submitted,

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